

# AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) An image printing device comprising:  
an input for receiving an image data signal in said image printing device; and  
a processor in said image printing device for receiving and processing said image data signal;

wherein

at a certain stage of the processing said image data signal contains one bit per pixel data specifying location data for each dot of which an image described by said image data signal is constituted but not a size for each said dot, and

said processor estimates a dot density in a defined area around each said dot, and determines a size for each said dot based on the estimated dot density for that said dot data derived from said location data of said image data signal.

2. (Currently amended) An image printing device comprising:  
an input for receiving an image data signal in said image printing device; and  
a processor in said image printing device for receiving and processing said image data signal;

wherein

said image data signal contains data specifying location data for each dot of which an image described by said image data signal is constituted,

said processor determines a size for each said dot based on dot density data derived from said location data of said image data signal, and

The image printing device of claim 1, further wherein said processor is programmed to count a number of dots specified by said location data for printing in a square matrix centered on a particular dot for which dot size is to be determined and to calculate a dot

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density estimation based on said number of dots in said square matrix.

3. (Original) The image printing device of claim 2, wherein a dot size of said particular dot is determined based on said dot density estimation.

4. (Original) The image printing device of claim 2, wherein said square matrix has five pixels to a side.

5. (Original) The image printing device of claim 2, wherein said processor, in calculating said dot density, weights each counted dot based on proximity to a center of said square matrix.

6. (Original) The image printing device of claim 1, wherein said printing device prints said image using said location data in said image data signal and dot size data determined by said processor.

7. (Original) The image printing device of claim 1, wherein said printing device is a laser printer.

8. (Original) The image printing device of claim 1, wherein said printing device is an ink-jet printer.

9. (Original) The image printing device of claim 1, wherein said printing device is a fax machine.

10. (Currently amended) A method of printing an image with an image printing device based on a[[n]] one bit per pixel image data signal that comprises data specifying print location data for each dot that constitutes said image but not a size for each said dot, said method comprising:

estimating a dot density in a defined area around each said dot, and  
determining a size for each said dot based on the estimated dot density for that said  
dot said print location data of said image data signal.

11. (Original) The method of claim 10, wherein said determining a size for each said dot further comprises, determining a density of dots around that dot for which size is being determined and determining said size for that dot based on said density.

12. (Currently amended) A method of printing an image with an image printing device  
based on an image data signal that comprises data specifying print location data for each dot  
that constitutes said image, said method comprising determining a size for each said dot  
based on said print location data of said image data signal, the determining including The  
method of claim 10, further comprising:

counting a number of dots specified by said print location data for printing in a square matrix centered on a particular dot for which dot size is to be determined; and  
 calculating a dot density estimation based on said number of dots in said square matrix.

13. (Original) The method of claim 12, further comprising determining a dot size of said particular dot is based on said dot density estimation.

14. (Original) The method of claim 12, further comprising defining said square matrix as having five pixels to a side.

15. (Original) The method of claim 12, wherein said calculating a dot density estimation further comprises weighting each counted dot based on proximity to a center of said square matrix.

16. (Original) The method of claim 10, further comprising printing said image with

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said printing device using said location data in said image data signal and dot size data.

17. (Currently amended) An image printing device comprising:  
 means for receiving an image data signal in said image printing device; and  
 processor means in said image printing device for receiving and processing said image data signal, wherein at a certain stage of the processing said image data signal contains one bit per pixel data specifying location data for each dot of which an image described by said image data signal is constituted but not a size for each said dot,

said processor means comprising means for estimating a dot density in a defined area around each said dot, and means for determining a size for each said dot based on the estimated dot density for that said dot~~data derived from said location data of said image data signal.~~

18. (Currently amended) An image printing device comprising:  
means for receiving an image data signal in said image printing device; and  
processor means in said image printing device for receiving and processing said image data signal, wherein said image data signal contains data specifying location data for each dot of which an image described by said image data signal is constituted, said processor means comprising

means for determining a size for each said dot based on dot density data derived from said location data of said image data signal.

~~The image printing device of claim 17, further wherein said processor means comprises:~~

means for counting a number of dots specified by said location data for printing in a square matrix centered on a particular dot for which dot size is to be determined, ~~[[;]]~~ and

means for calculating a dot density estimation based on said number of dots in said square matrix.

19. (Original) The image printing device of claim 18, wherein a dot size of said

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particular dot is determined based on said dot density estimation.

20. (Currently amended) Computer-readable instructions stored on a media for recording computer-readable instructions, wherein said instructions cause a processing device, that processes receives a[[n]] one bit per pixel image data signal comprising data specifying print location data for each dot that constitutes an image but not a size for each said dot, to estimate a dot density in a defined area around each said dot, and determine a size for each said dot based on the estimated dot density for that said dot~~said print location data of said image data signal.~~

21. (Original) The computer readable instructions of claim 20, wherein said instructions further cause said processing device to:  
determine a density of dots around that dot for which size is being determined; and  
determine said size for that dot based on said density.

22. (Currently amended) ~~The computer readable instructions of claim 20, wherein said instructions further cause said processing device to:~~ Computer-readable instructions stored on a media for recording computer-readable instructions, wherein said instructions cause a processing device, that receives an image data signal comprising data specifying print location data for each dot that constitutes an image, to determine a size for each said dot based on said print location data of said image data signal by

counting a number of dots specified by said print location data for printing in a square matrix centered on a particular dot for which dot size is to be determined; and  
calculating[[e]] a dot density estimation based on said number of dots in said square matrix;  
wherein said size for that particular dot is determined based on said calculated dot density.

23. (New) The method of claim 10, wherein the one bit per pixel image data signal is

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received by the image printing device from an external device.

24. (New) The method of claim 10, wherein the one bit per pixel image data signal is derived from a continuous-tone image data signal.

25. (New) The method of claim 24, wherein the one bit per pixel image data signal is generated by the image printing device from the continuous-tone image data signal.

26. (New) The method of claim 24, further comprising:  
processing the continuous-tone image data signal to form a multiple bits per pixel image data signal that defines a density of the dots that constitute said image; and  
error-diffusing the multiple bits per pixel image data signal to form the one bit per pixel image data signal.

27. (New) The method of claim 26, wherein the processing and the error-diffusing are performed by an external device coupled to the image printing device.

28. (New) The method of claim 26, wherein the processing and the error-diffusing are performed by the image printing device.

29. (New) The method of claim 26, wherein the multiple bits per pixel image data signal is an eight bits per pixel image data signal.

30. (New) The method of claim 10, wherein the defined area has a predetermined size that is the same for each said dot.

31. (New) The method of claim 1, wherein the defined area has a predetermined size that is the same for each said dot.